

Fig.1

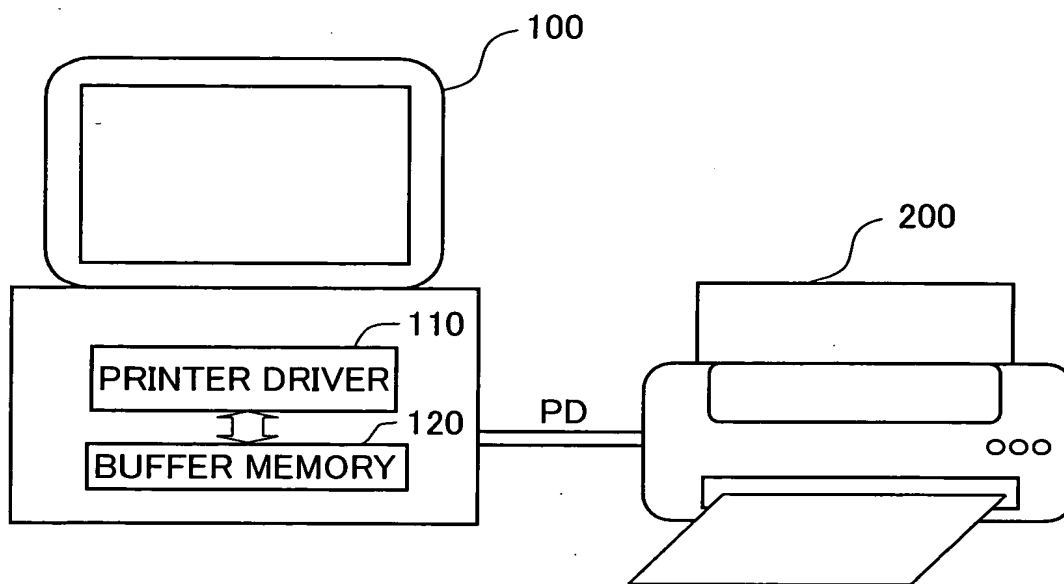


Fig.2(A)

COLOR IMAGE DATA

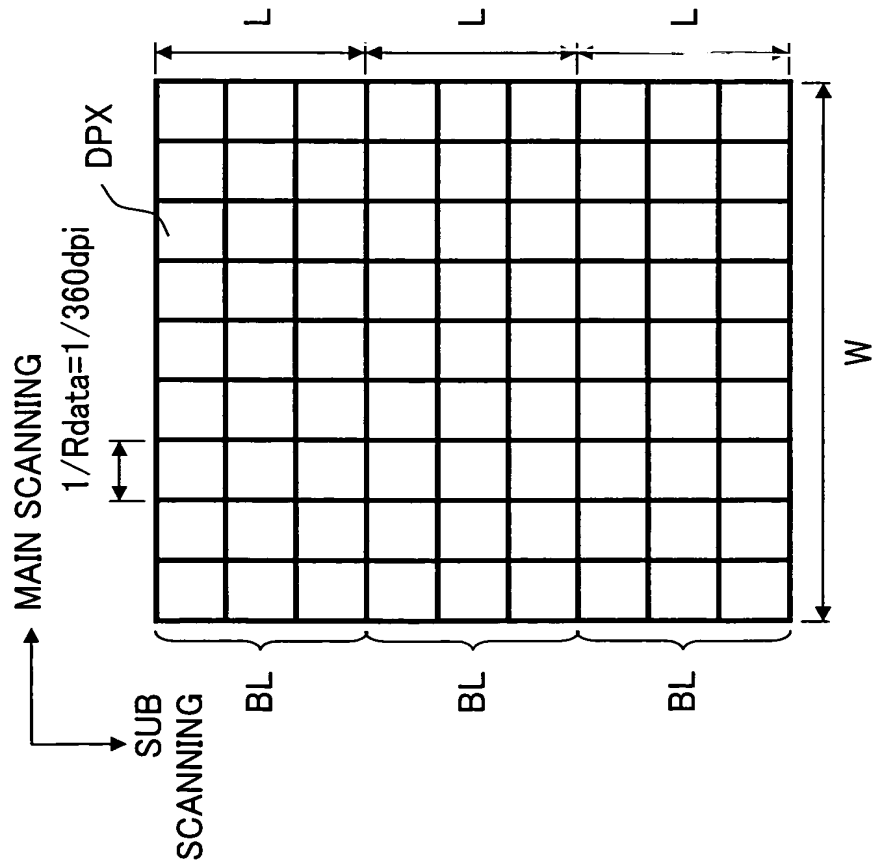


Fig.2(B)

PRINT DATA PD (DOT DATA)

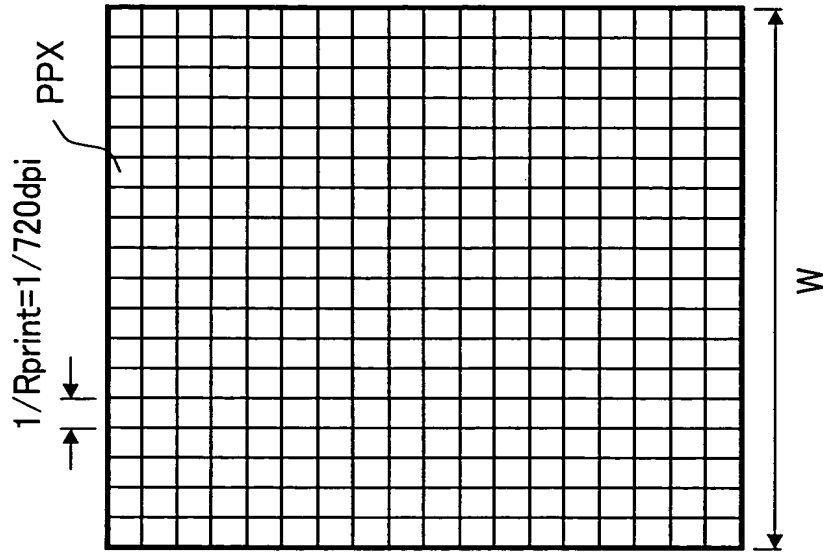
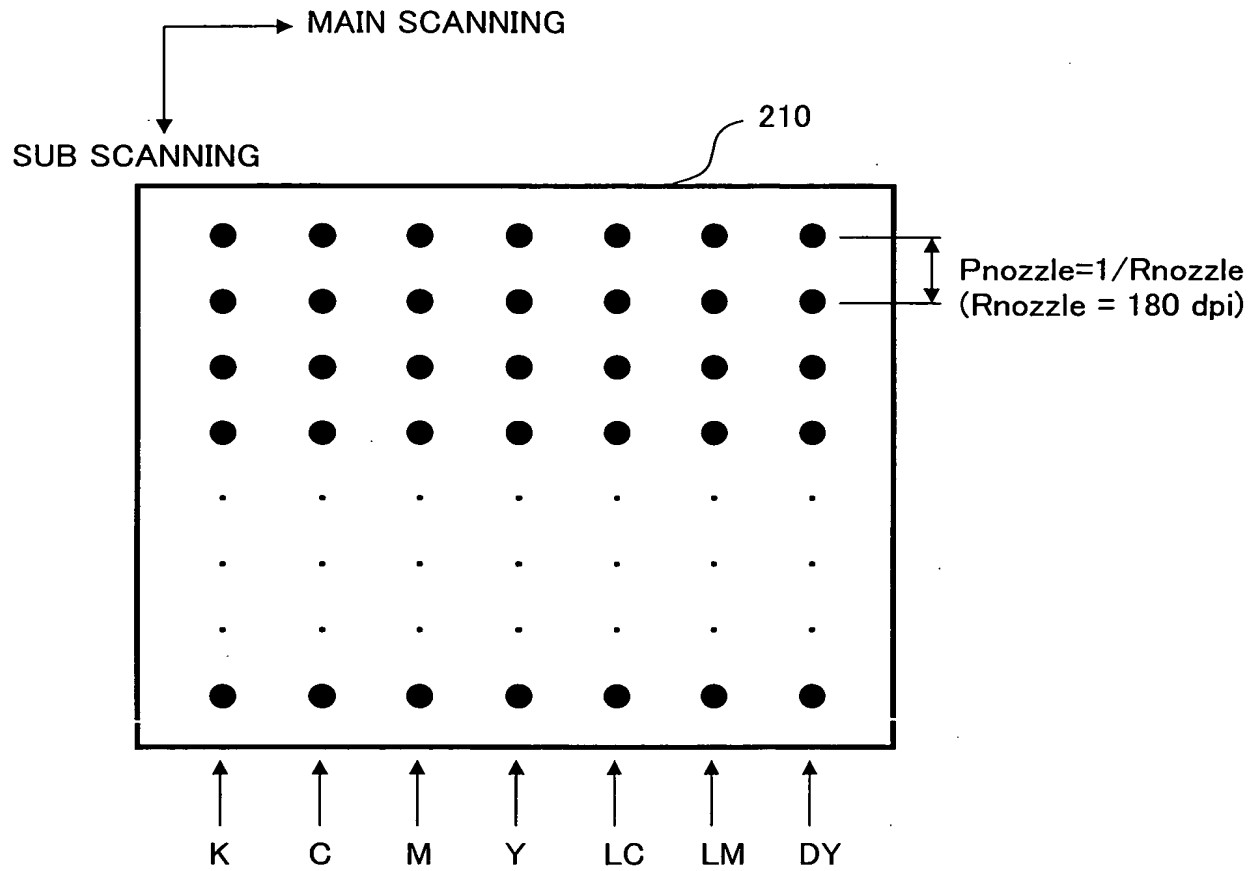


Fig.3



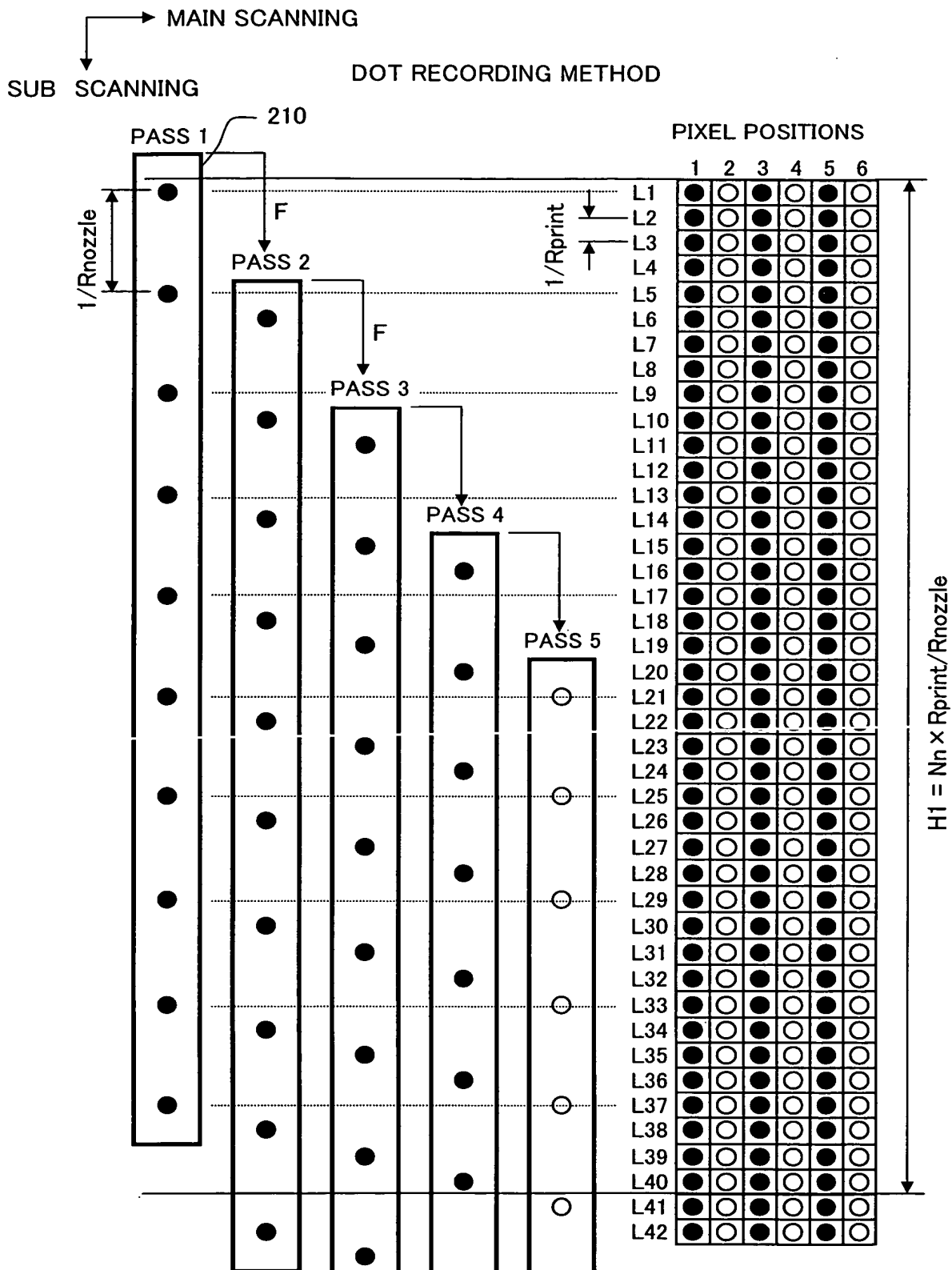
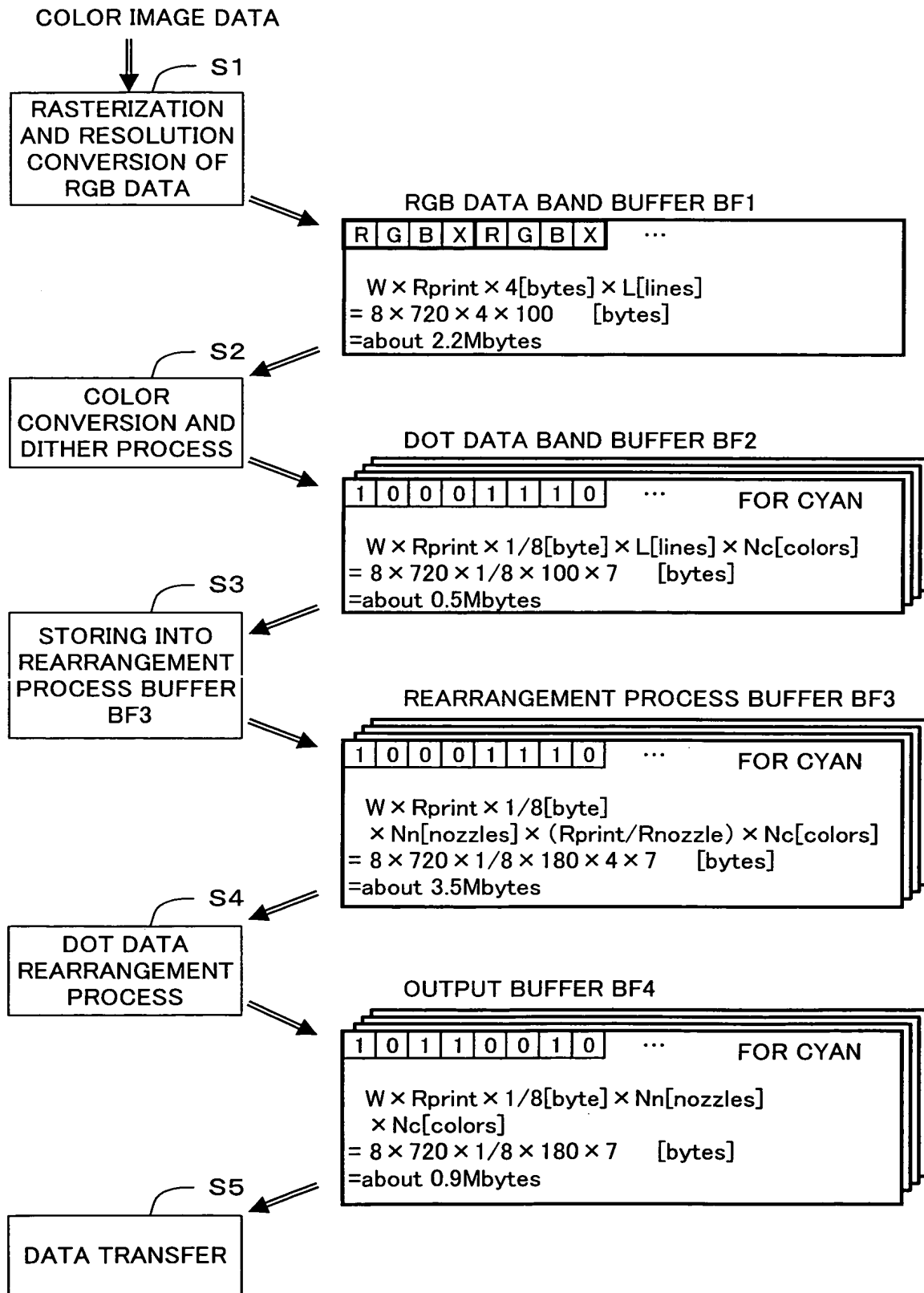


Fig.4

NUMBER OF USED NOZZLES: N_n
NOZZLE RESOLUTION: $R_{nozzle} = 180\text{dpi}$
PRINTING RESOLUTION: $R_{print} = 720\text{ dpi}$

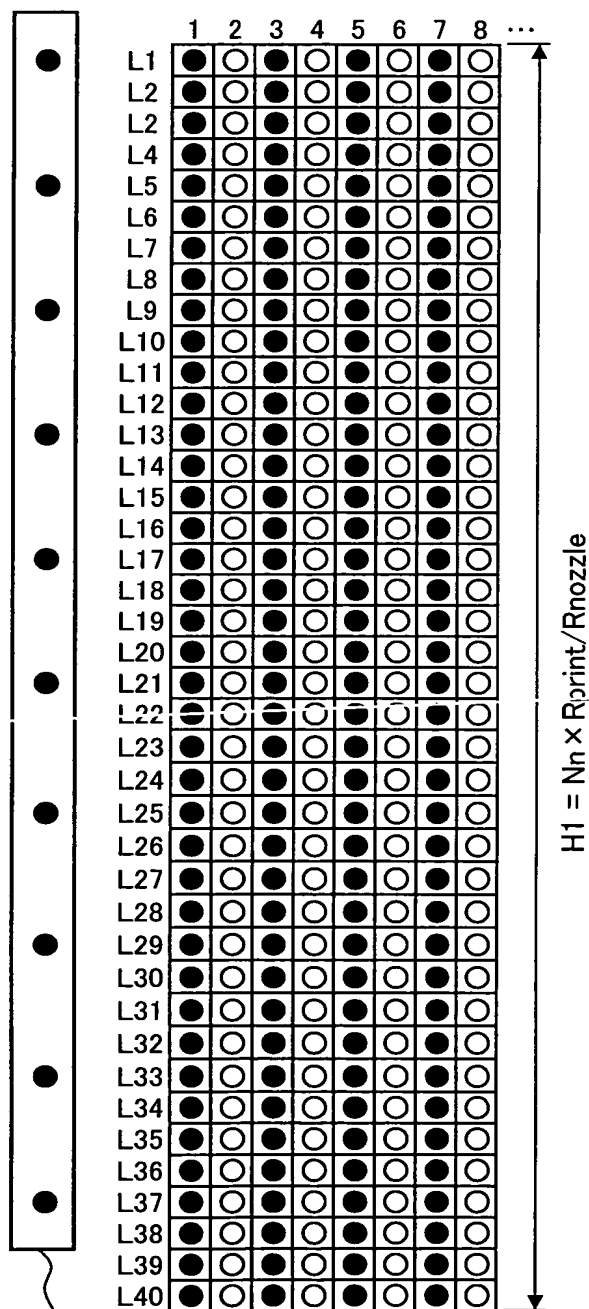
Fig.5

COMPARATIVE EXAMPLE

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Fig.6(A)

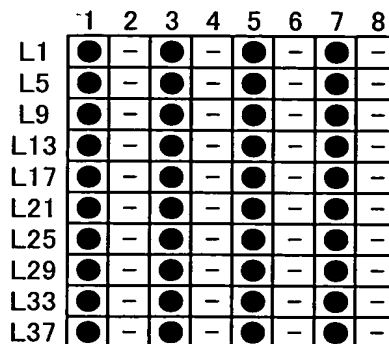
REARRANGEMENT
 PROCESS BUFFER BF3



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Fig.6(B)

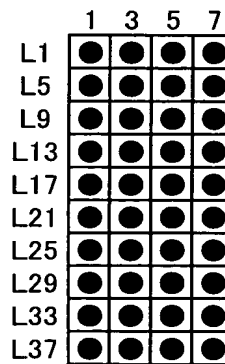
OUTPUT BUFFER BF4



●: DOTS SUBJECT TO
 RECORDING ON PASS 1
 —: DUMMY DATA

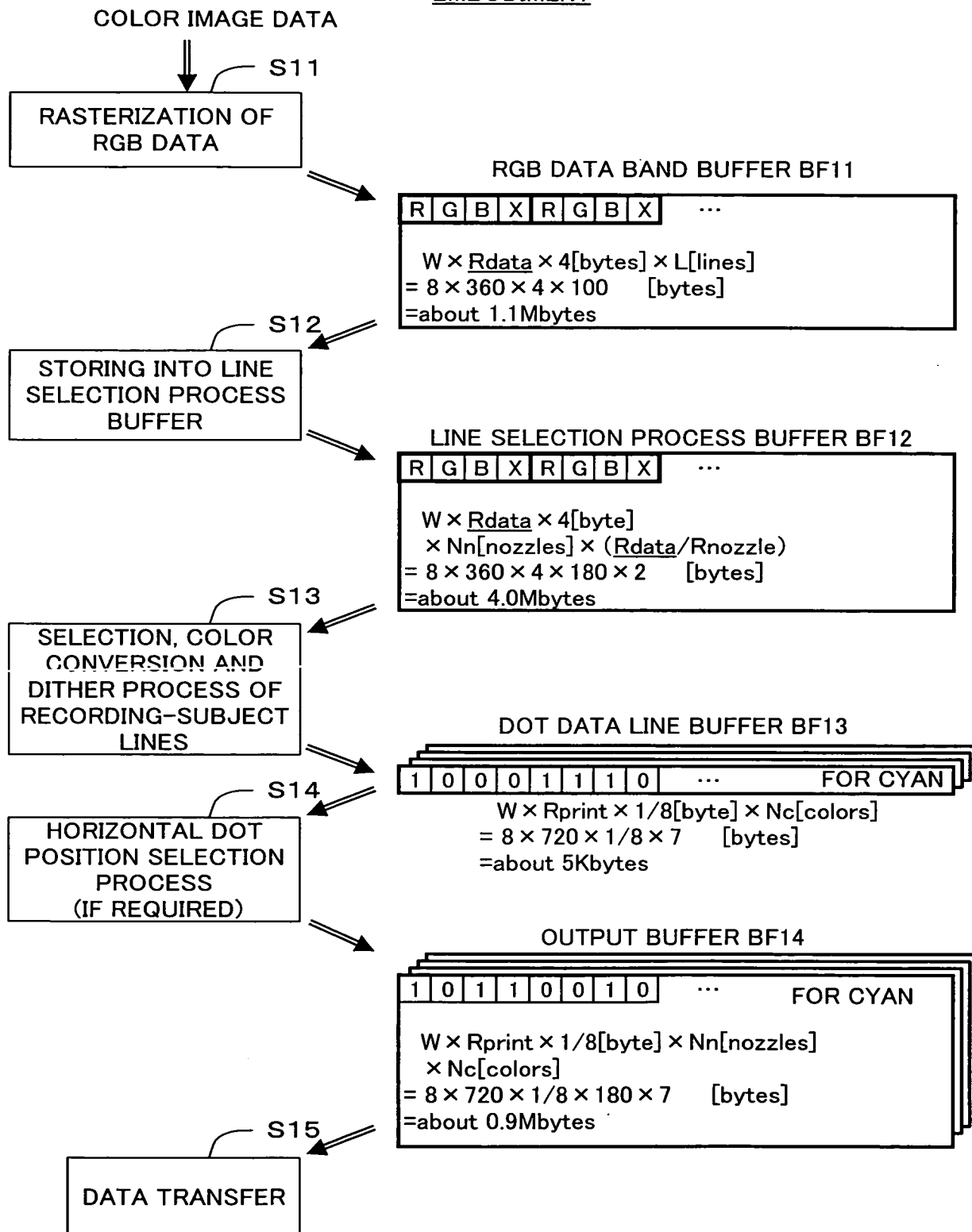
Fig.6(C)

OUTPUT BUFFER BF4'



●: DOTS SUBJECT TO
 RECORDING ON PASS 1

Fig.7

EMBODIMENT

EMBODIMENT

Fig.8(A)

LINE SELECTION
 PROCESS BUFFER BF12

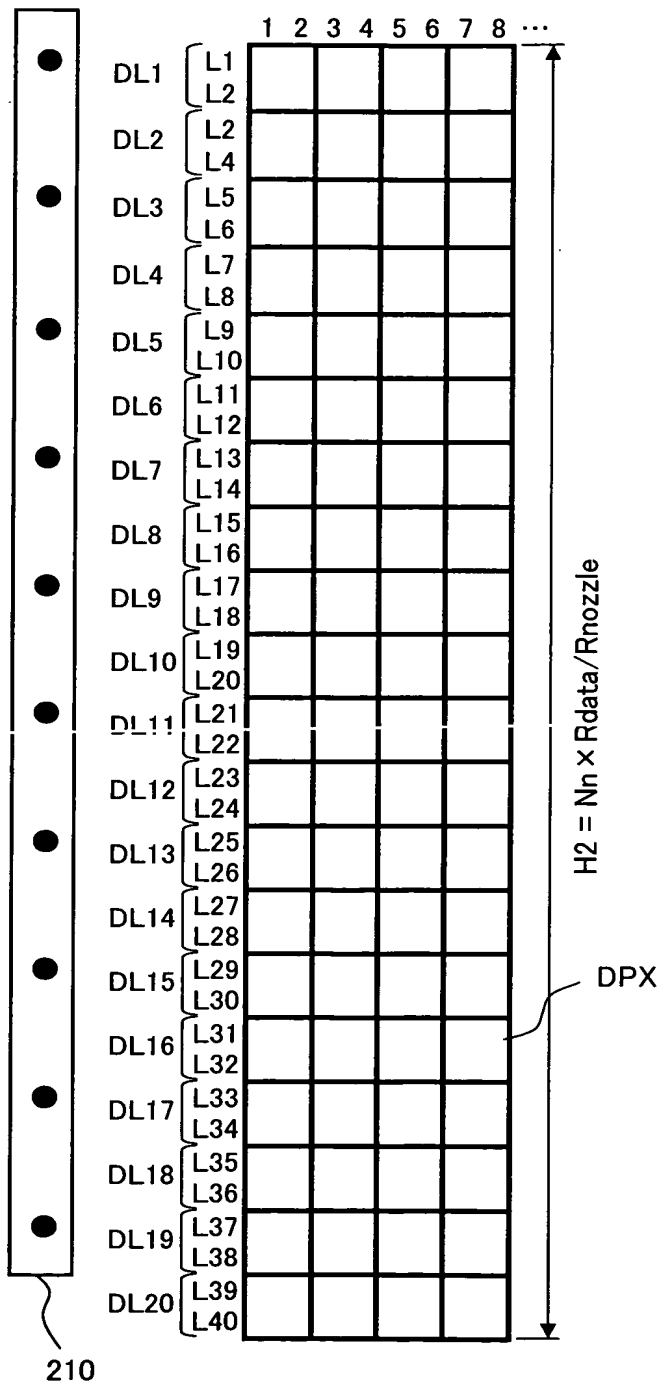


Fig.8(B)

DOT DATA
 LINE BUFFER BF13

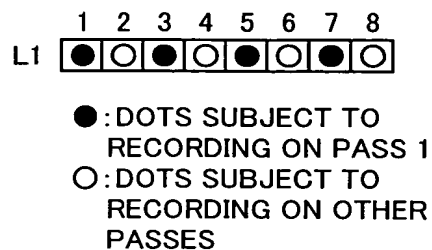


Fig.8(C)

OUTPUT BUFFER BF14

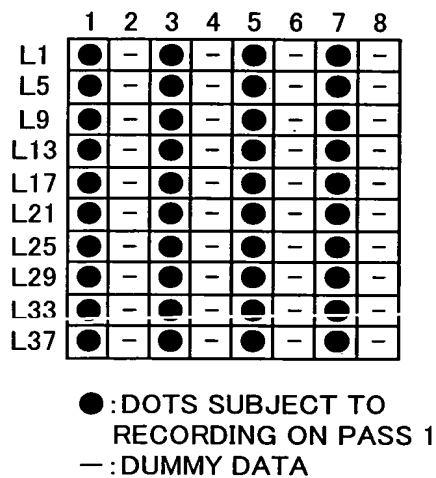


Fig.9

COLOR CONVERSION PROCESS AND DITHER PROCESS

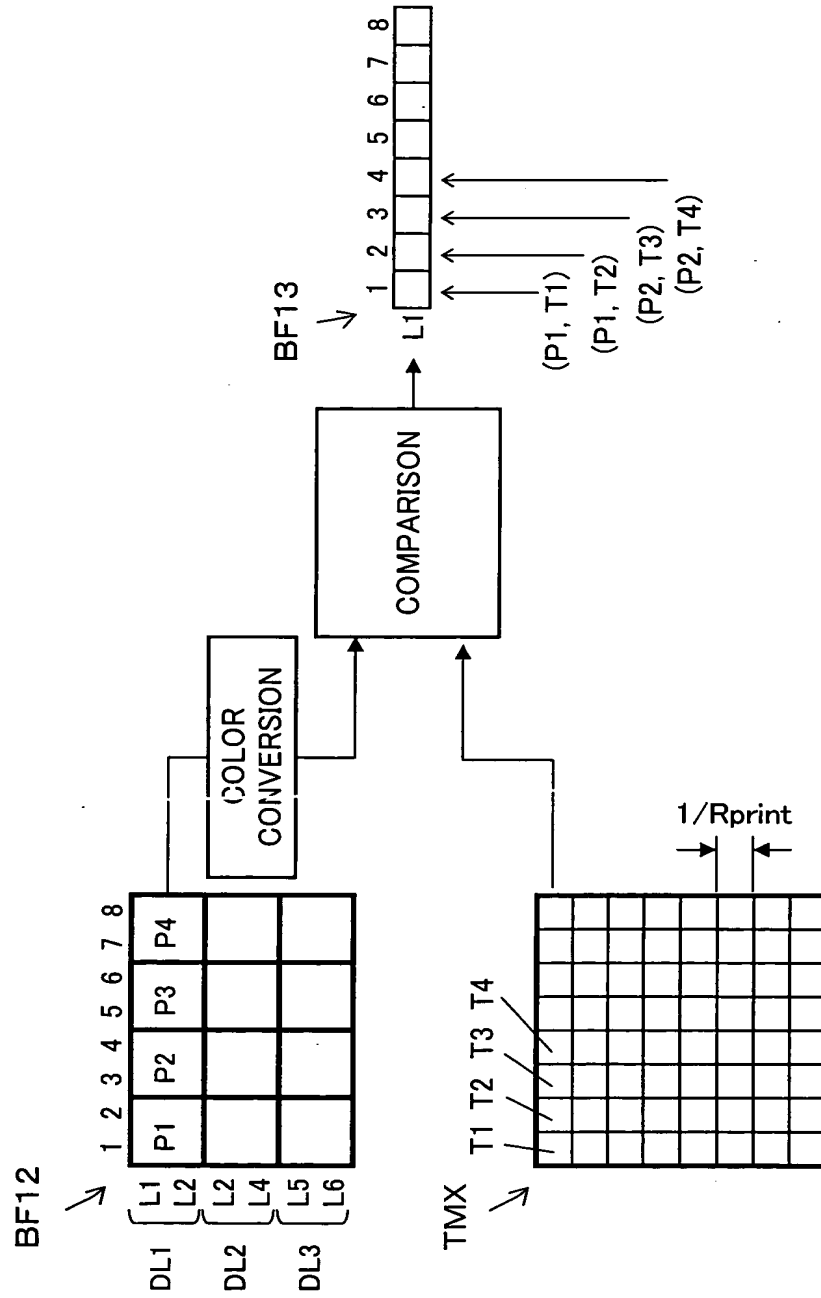


Fig.10(A)

BUFFER CAPACITY ACCORDING TO COMPARATIVE EXAMPLE

TYPE OF BUFFER MEMORY	BUFFER CAPACITY [bytes]	PRINTING RESOLUTION Rprint		
		720	1440	2880
RGB DATA BAND BUFFER BF1	$W \times R_{\text{print}} \times 4[\text{bytes}] \times L[\text{lines}]$	2.2	4.4	8.8
DOT DATA BAND BUFFER BF2	$W \times R_{\text{print}} \times 1/8[\text{byte}] \times L[\text{lines}] \times N_{\text{c}}[\text{colors}]$	0.5	1.0	1.9
REARRANGEMENT PROCESS BUFFER BF3	$W \times R_{\text{print}} \times 1/8[\text{byte}] \times N_{\text{n}}[\text{nozzles}] \times (R_{\text{print}}/R_{\text{nozzle}}) \times N_{\text{c}}[\text{colors}]$	3.5	13.8	55.4
OUTPUT BUFFER BF4	$W \times R_{\text{print}} \times 1/8[\text{byte}] \times N_{\text{n}}[\text{nozzles}] \times N_{\text{c}}[\text{colors}]$	0.9	1.7	3.5
TOTAL [Mbytes]	(Assuming that $W = 8$, $L = 100$, $N_{\text{c}} = 8$, $N_{\text{n}} = 180$, and $R_{\text{nozzle}} = 180$)	7.1	20.9	69.6

Fig.10(B)

BUFFER CAPACITY ACCORDING TO EMBODIMENT

TYPE OF BUFFER MEMORY	BUFFER CAPACITY [bytes]	PRINTING RESOLUTION Rprint		
		720	1440	2880
RGB DATA BAND BUFFER BF11	$W \times R_{\text{data}} \times 4[\text{bytes}] \times L[\text{lines}]$	1.1	2.2	4.4
LINE SELECTION PROCESS BUFFER BF12	$W \times R_{\text{data}} \times 4[\text{bytes}] \times N_{\text{c}}[\text{nozzles}] \times (R_{\text{data}}/R_{\text{nozzle}})$	4.0	4.0	4.0
DOT DATA LINE BUFFER BF13	$W \times R_{\text{print}} \times 1/8[\text{byte}] \times N_{\text{c}}[\text{colors}]$	0.005	0.01	0.02
OUTPUT BUFFER BF14	$W \times R_{\text{print}} \times 1/8[\text{byte}] \times N_{\text{n}}[\text{nozzles}] \times N_{\text{c}}[\text{colors}]$	0.9	1.7	3.5
TOTAL [Mbytes]	(Assuming that $W = 8$, $L = 100$, $N_{\text{c}} = 8$, $N_{\text{n}} = 180$, $R_{\text{data}} = 360$, and $R_{\text{nozzle}} = 180$)	6.0	7.9	11.9